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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VII
726 Minnesota Avenue
Kansas City, Kansas 66101


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| IN THE MATTER OF:<br><br>SHELLER-GLOBE CORPORATION<br>3200 Main Street<br>Keokuk, Iowa 52632<br><br>EPA ID No. IAD984589085<br><br>SCHLEGEL SEALING SYSTEMS, INC.<br>3200 Main Street<br>Keokuk, Iowa 52632<br><br>EPA ID No. IAD005136023<br><br>Respondents. | ADMINISTRATIVE ORDER<br>ON CONSENT<br><br>U.S. EPA Docket No. VII-91-H-[redacted]<br>0040<br>Region<br><br>Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6928(h). |

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| SHELLER-GLOBE CORPORATION<br>3200 Main Street<br>Keokuk, Iowa 52632 | ADMINISTRATIVE ORDER ON CONSENT |
| EPA ID No. IAD984589085 | U.S. EPA Docket No. VII-91-H-0 |
| SCHLEGEL SEALING SYSTEMS, INC.<br>3200 Main Street<br>Keokuk, Iowa 52632 | |
| EPA ID No. IAD005136023 | |
| Respondents. | |
| | Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6928(h). |

## I. JURISDICTION

This Administrative Consent Order is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6928(h). The authority vested in the Administrator has been delegated to the Regional Administrator, Region VII, by EPA

Delegation Nos. 8-31 and 8-32 dated April 16, 1985. On May 16, 1988, the authority vested in the Regional Administrator was further delegated to the Director of the Waste Management Division, Region VII, by EPA Delegation Nos. R7-8-37.

This Consent Order is issued to Sheller-Globe Corporation (SGC) and Schlegel Sealing Systems, Inc. (Schlegel) (hereinafter collectively referred to as Respondents). SGC is an operator and former owner of an interim status hazardous waste management facility, located at 3200 Main Street, Keokuk, Iowa 56632. Schlegel is an operator and the owner of the facility. For purposes of this Consent Order, "Facility" shall mean the property within the boundaries shown on the map included as Attachment I, hereto.

Respondents consent to and agree not to contest EPA's jurisdiction to issue this Consent Order and to enforce its terms. Further, Respondents will not contest EPA's jurisdiction to (1) compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial, or (2) impose sanctions for violations of this Consent Order.

## II. PARTIES BOUND

1. This Consent Order shall apply to and be binding upon Respondents and their successors and assigns.

2. No change in ownership, lease agreement or corporate or partnership status relating to Respondents or the Facility will in any way alter Respondents' responsibilities under this Consent Order.

3. Respondents shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, consultants and any other parties retained to conduct or monitor any portion of the work performed pursuant to this Consent Order within thirty (30) days of the effective date of this Consent Order or date of such retention, and shall condition all such contracts on compliance with the terms of this Consent Order.

4. While this Consent Order is in effect, Respondents shall give notice of this Consent Order to any successor in interest prior to transfer of ownership or operation of the Facility and shall within ten (10) business days following any such transfer of ownership or operation provide written verification to EPA that such notice has been given. Such verification shall also include a description of the nature of such transfer of ownership or operation of the Facility or any portion thereof.

## III. STATEMENT OF PURPOSE

1. In entering into this Consent Order, the mutual objectives of EPA and Respondents are: (1) to perform Interim Measures (IM) at the Facility in the event Respondents discover new information that identifies an actual or imminent threat to human health and/or the environment; (2) to perform a RCRA Facility Investigation (RFI) to determine the nature and extent of releases of hazardous waste and/or hazardous constituents at or from the Facility; and (3) to perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for the corrective action necessary to prevent or mitigate any migration

or releases of hazardous wastes or hazardous constituents at or from the Facility, if any, which may be necessary to protect human health and the environment.

## IV. EPA'S FINDINGS OF FACT

The Director, Waste Management Division, EPA Region VII, hereby makes the following findings of fact:

1. SGC is a corporation organized under the law of the State of Ohio; is authorized to do business in the State of Iowa; and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15). Schlegel is a corporation organized under the law of the State of Indiana; is authorized to do business in the State of Iowa; and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

2. Beginning in 1947, the Facility was operated as the Dryden Rubber Division of Sheller Manufacturing Company. In 1966, Sheller Manufacturing Company merged with Globe-Wernicke Industries, Inc. to form SGC. SGC was involved in the manufacture of production and replacement parts for automobiles as well as rubber products, including weather stripping for cars. On June 11, 1986, a predecessor of Knoll International Holdings, Inc., Shearson, Lehman Brothers and members of management purchased the stock of SGC. On December 8, 1988, SGC's stock was sold to United Technologies Corporation (UTC), Gibbons, Green & Van Amerongen and members of management. On November 10, 1989, UTC acquired Gibbons, Green and Van Amerongens' interest in SGC and SGC became a wholly owned subsidiary of UTC. On June 28,

1990, the Keokuk plant was sold to Schlegel. The plastic padded business of SGC will continue at the Facility until at least December 1992, pursuant to a lease agreement between SGC and Schlegel.

3. The Facility is located in the north 1/2 of Section 23, Township 65 North, Range 5 West in Lee County, Iowa. SGC generated and stored hazardous waste at the Facility subject to the interim status requirements of 40 C.F.R. Part 265. Wastes generated at the Facility are primarily process wastes from crash pad (automobile dash board) manufacturing and consist of spent solvents, spent methylene chloride, isocyanates, waste stripping solids and waste polyol.

4. SGC owned and operated its facility as a hazardous waste management facility on or after November 19, 1980, the date rendering the Facility subject to the above-referenced interim status requirements or the requirements to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924, 6925. SGC achieved interim status pursuant to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e) by submitting both a timely Notification of Hazardous Waste Activity and a Part A Permit Application to EPA.

5. Pursuant to Section 3010 of RCRA, 42 U.S.C. § 6930, SGC notified EPA of its hazardous waste activity on July 17, 1980. In its Notification of Hazardous Waste Activity, SGC indicated that it generated, treated, stored or disposed of hazardous waste at the facility. The only activities conducted at the Facility were generation and storage.

6. On November 17, 1980, SGC filed a Part A Hazardous Waste Permit Application identifying container storage as the process employed in the management and handling of hazardous waste. The process design capacity of the container storage area was stated to be 11,000 gallons.

7. On June 12, 1983, SGC amended its Notification of Hazardous Waste Activity by indicating that it was also a transporter of hazardous waste. The amended Notification also deleted certain wastes listed in the July 17, 1980 Notification of Hazardous Waste Activity and the November 17, 1980 Part A Hazardous Waste Permit Application.

8. On August 20, 1986, SGC filed a second amended Notification of Hazardous Waste Activity. The second amended notification added a hazardous waste.

9. On August 20, 1986, SGC also filed a revised Part A Hazardous Waste Permit Application. The revised application was for the relocation of the hazardous waste container storage area and for the storage of hazardous wastes which were not specified in the original Part A submission.

10. The above-referenced Notification of Hazardous Waste Activity, Part A Hazardous Waste Permit Application and amendments indicate that SGC generated and stored, the following hazardous wastes:

A. Hazardous wastes exhibiting the characteristics of ignitability, corrosivity, reactivity or EP toxicity identified at 40 C.F.R. § 261.20 - 261.24:

D001
D002

B. Hazardous waste from nonspecific sources identified at 40 C.F.R. § 261.31:

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| F001 | F002 |
| F003 | F005 |

C. Commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products, or manufacturing chemical intermediates identified at 40 C.F.R. § 261.33(f):

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| U002 | U159 | U116 |
| U229 | U121 | U219 |
| U236 | U140 | U220 |
| U238 | U223 | |

D. Commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products, or manufacturing chemical intermediates identified at 40 C.F.R. § 261.33(e):

P050

11. The areas of concern at the Facility are shown in Attachment I and are fully described as follows:

A. The Drum Staging Area (Attachment 1) is approximately ten (10) feet square, has a concrete floor and generally contains no more than four (4) fifty-five (55) gallon drums. Numerous wastes that are or have been handled at the drum staging area include methylene chloride, methyl ethyl ketone and head flush solvents. Wastes are or were drummed as they are generated and the drums are and were temporarily staged in the

drum staging area prior to being removed to the hazardous waste storage area.

B. The fill material beneath the container storage area (Attachment I) is an area beginning approximately two (2) feet below the ground surface behind the chemical mixing building. The fill material may contain wastes generated at the facility.

C. The 3.6 acre Cooling Lake/Surface Impoundment (Attachment I) was constructed in 1969 and 1970 to contain contact and non-contact cooling water prior to reuse in the facility's manufacturing process. The types of waste water received by the cooling lake/surface impoundment include storm water runoff from the facility and adjacent properties, plant roof drainage, plant parking lot drainage, non-contact cooling water and boiler blowdown. Prior to 1988, crashpad washes and mold cleaning operation waste water also went through a ditch to the cooling pond. The cooling water is discharged under an NPDES permit to an unnamed tributary of Soap Creek. The berms surrounding the cooling lake/surface impoundment are ten (10) feet wide at the top and sixteen (16) feet high. The intakes to the cooling lake/surface impoundment are the northeast and southeast inlets at the southern arm of the lake. The northeast inlet receives or has received process wastes from a 24-inch sewer line at a flow of approximately 110,000 to 130,000 gallons per day. Process waters discharged to the sewer include water from the upper and lower reservoirs which receive milling, boiler

and compressor area floor drain waste water. The southeast inlet receives floor and roof drain waters and parking lot runoff.

D. It is EPA's position that a drum burial area holding approximately 300 drums containing organic solvent wastes exists on the facility. It is EPA's position that the drums were buried on the facility in a trench less than one (1) acre in the early 1970's during the construction of an adjacent parking lot. A geophysical survey of the area conducted by Schlegel in 1990 did not detect the presence of any drums.

12. In an October 16, 1986 letter to EPA, Sheller-Globe requested that interim status for the hazardous waste container storage area be terminated. Closure activities have been conducted at the container storage area. Schlegel is currently awaiting EPA approval of the closure certification.

13. EPA took water and sediment samples at various locations at the facility during a site visit on September 26 and 27, 1988.

14. Analytical results from water samples collected from the outfalls of the sewer pipes leading to the ditch that leads to the cooling pond and at the inlets of the cooling pond on September 26 and 27, 1988 indicated the presence of hazardous wastes and hazardous constituents at the following maximum levels: 410 µg/L cadmium, 280 µg/L lead, 7 µg/L phenols, 55 µg/L benzyl alcohol, 43 µg/L bis (2-ethylhexyl) phthalate, 69 µg/L benzoic acid, 30 µg/L methylene chloride, 200 µg/L toluene, 4,400 µg/L acetone, 120 µg/L carbon disulfide, 20 µg/L 2-butanone, 73

µg/L 4-methyl 2-pentanone, 240 µg/L 1,1,1-trichloroethane and 17 µg/L xylene.

15. Analytical results from sediment samples collected from the outfalls of the sewer pipes leading to the ditch that leads to the cooling pond and the inlets of the cooling pond on September 26 and 27, 1988, indicated the presence of hazardous wastes and hazardous constituents at the following maximum levels: 19 mg/kg cadmium, 120 mg/kg lead, 78 µg/kg acenapthylene, 78 µg/kg flourene, 1300 µg/kg pyrene, 640 µg/kg butyl benzyl phthalate, 260 µg/kg benzo anthrocene, 54,000 µg/kg bis (2-ethylhexyl) phtalate, 320 µg/kg chrysene, 620 µg/kg di-n-octyl phtlalate, 2,700 µg/kg 4-methyl phenol, 130 µg/kg 1,1,2,2-tetrachloroethane, 92 µg/kg acetone, 59 µg/kg methylene chloride, 48 µg/kg 1,1,1-trichloroethane, 180 µg/kg xylene, 150 µg/kg toluene, 35 µg/kg ethyl benzene, 17 µg/kg 2-butanone, 7 µg/kg trichloroethane, 15 µg/kg trans-1,2-dichloroethane, 490 µg/kg phenanthrene, 110 µg/kg anthracene and 470 µg/kg flouranthene.

16. The hazardous wastes and hazardous constituents identified in Paragraphs 14 and 15 will at certain concentrations pose a threat to human health and the environment. One of the purposes of this Consent Order is to determine levels of hazardous wastes and hazardous constituents which are currently present at the Site.

17. Available information indicates that native soils are composed of glacial tills. The soils are typically a clayey paleosol and are several tens of feet thick.

18. Available boring logs in the vicinity of the Facility indicate that the depth to bedrock varies from approximately fifty (50) to over two hundred (200) feet. Potential aquifers beneath the site include the unconsolidated glacial drift aquifer and the underlying Lower Mississippian bedrock aquifer. The groundwater table is believed to range from less than fifteen (15) feet to greater than fifty (50) feet in the upland areas in the vicinity of the Sheller-Globe facility.

19. The Lower Mississippian aquifer, comprised of the Osage Series limestone and dolomites, is the aquifer commonly tapped by wells in the Keokuk area. The Lower Mississippian aquifer is unconfined to semi-confined in this area, depending on the characteristics of the overburden material and the thickness and mineralogy of the overlying Warsaw Formation shales and dolomites. Recharge zones are primarily the upland areas whereas discharge areas are commonly lowlands and streams. The water table contours of the Lower Mississippian aquifer tend to follow surifical topography. The Lower Mississippian aquifer is likely to provide a substantial baseflow contribution to rivers and streams which incise the unit.

20. Hazardous wastes and/or hazardous constituents may migrate from the facility to the environment and could potentially affect off-site receptors. Potential off-site receptors include the surrounding commercial and residential areas. Hazardous wastes and/or hazardous constituents may also

migrate from the facility's cooling pond via surface water drainage to the Soap Creek. One of the purposes of this Order is to determine whether hazardous wastes and/or hazardous constituents have migrated from the Facility.

21. The facility property encompasses 44.5 acres of land extending west from Main Street. The property is occupied by facility structures on the eastern half and contains some open fields and woods on the western half. Site topography generally slopes from east to west. Surface water drainage including that from the cooling water pond discharges to Soap Creek. Some surface water runoff from off-site property, primarily east of the plant, also flows to the cooling pond. The facility is surrounded by a wide variety of land uses, including light and heavy industrial, commercial, residential, wooded areas as well as a school. The property east of the facility immediately along Main Street is primarily commercial and public park land. The facility is bounded on the south by South 31st Street. Along that street are three commercial buildings. The property west of the facility is primarily wooded and contains scattered residences west of Soap Creek. Immediately north of the facility is land which appears to be a residential/agricultural property.

## V. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

1. Based on the foregoing findings of fact, and the administrative record, the Director, Waste Management Division, of EPA Region VII, has made the following conclusions of law and determinations:

A. Respondents are "persons" within the meaning of Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

B. Respondent SGC is an operator and the former owner of a facility that is operating subject to § 3005(e) of RCRA, 42 U.S.C. § 6925(e) and Respondent Schlegel is an operator and the owner of a facility that is operating subject to § 3005(e) of RCRA, 42 U.S.C. § 6925(e).

C. Certain wastes and constituents thereof found at the Facility are hazardous wastes and/or hazardous constituents thereof as defined by Section 1004(5) of RCRA, 42 U.S.C. § 6903(5). These are also hazardous wastes and/or hazardous constituents within the meaning of Section 3001 of RCRA, 42 U.S.C. § 6921 and 40 C.F.R. Part 261.

D. There is or has been a release of hazardous wastes and/or hazardous constituents into the environment from the Facility.

E. The actions agreed upon in this Consent Order are necessary to protect human health and/or the environment.

## VI. WORK TO BE PERFORMED

1. Pursuant to Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), Respondents agree and are hereby ordered to perform the following acts in the manner and by the dates specified herein. Unless otherwise specified herein, "days" shall mean calendar days. In the event that a deadline for the performance of any act specified herein falls on a weekend or a federal holiday, the deadline shall become the next work day. All work

undertaken pursuant to this Order shall be performed in a manner consistent with the Scope of Work attached hereto as Attachments II and III and incorporated herein by reference; any EPA approved Interim Measures Workplan required pursuant to this Order, RCRA Facility Investigation Workplan, Corrective Measures Implementation Program Plan, and all other Workplans; RCRA and its implementing regulations; and applicable EPA guidance documents. Applicable guidances include the "RCRA Facility Investigation (RFI) Guidance" (EPA 530/SW-87-001), "RCRA Ground Water Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986), "Test Methods for Evaluating Solid Waste" (SW-846, November 1986) and "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities" (EPA 530/SW-85-031, July 1986) and such other guidances as may be identified to Respondents by EPA.

INTERIM MEASURES (IM)

2. At this time, no Interim Measures shall be required of Respondents by this Consent Order. In the event Respondents discover new information that identifies an actual or imminent threat to human health and/or the environment, however, Respondents shall notify EPA in writing within ten (10) days, summarizing the immediacy and magnitude of the threat to human health and the environment. Within forty-five (45) days of notifying EPA, Respondents shall submit to EPA an Interim Measures Workplan for EPA approval which identifies Interim Measures that mitigate this threat and are consistent with and

integrated into any long-term solution at the Facility. Respondents shall implement the Interim Measures Workplan immediately upon receipt of approval thereof by EPA.

3. The Interim Measures Workplan shall ensure that the Interim Measures are designed to mitigate current or potential threat(s) to human health or the environment and are consistent with and integrated into any long term solution at the Facility. The Interim Measures Workplan shall document the procedures to be used by Respondents for the implementation of Interim Measures and shall include the objective of the Interim Measures; design, construction, operation, monitoring and maintenance requirements; and detailed schedules or other objectives as identified to Respondents by EPA.

4. The Interim Measures Workplan shall be written to include the components recommended in the RCRA Corrective Action Interim Measures Guidance documents (EPA/530-SW-88-029, June 1988). These components include Interim Measures Objectives; a Health and Safety Plan; a Data Collection Quality Assurance Plan; a Data Management Plan; Design Plans and Specifications; an Operation and Maintenance Plan; a Project Schedule; an Interim Measure Construction Quality Assurance Plan; and Reporting Requirements.

RCRA FACILITY INVESTIGATION (RFI)

5. Within sixty (60) days of the effective date of this Consent Order, Respondents shall submit to EPA a Description of Current Conditions providing the background information pertinent

to the known conditions at the Facility. This information shall be consistent with Task I of the RFI Scope of Work provided herein as Attachment II. The data generated during any previous investigations, inspection or other relevant data may be included in the Description of Current Conditions. EPA will provide Respondents with comments on the Description of Current Conditions. However, EPA's comments shall not be construed as approval by EPA of the Description of Current Conditions.

6. Within ninety (90) days of the effective date of this Consent Order, Respondents shall submit to EPA a Pre-Investigation Evaluation of Corrective Measure Technologies. The Pre-Investigation Evaluation of Corrective Measures Technologies will be completed in a manner consistent with Task II of the RFI Scope of Work contained in Attachment II of this Consent Order incorporated herein by reference. EPA will provide Respondents with comments on the Pre-Investigation Evaluation of Corrective Measures Technologies. However, EPA's comments shall not be construed as approval by EPA of the Pre-Investigation Evaluation of Corrective Measures Technologies.

7. Within the later of forty-five (45) days of Respondents' receipt of EPA's comments on the draft Description of Current Conditions, or 150 days of the effective date of this Consent Order, Respondents shall submit to EPA a draft Workplan for the RFI. The RFI Workplan shall be designed to define the presence, magnitude, extent, direction, and rate of movement of hazardous wastes or hazardous constituents within and from the facility.

The RFI Workplan shall address the areas of concern which include, but are not limited to, the drum staging area; the fill material beneath the container storage area; the cooling pond; and the drum burial area that EPA maintains exists at the facility. The RFI Workplan shall document the procedures the Respondents shall use to conduct those investigations necessary to: (1) characterize the potential pathways of contaminant migration; (2) characterize the source(s) of contamination; (3) define the degree and extent of contamination; (4) identify actual or potential receptors; and (5) support the development of alternatives from which a corrective measure will be selected by EPA. The RFI Workplan shall be developed in accordance with RCRA, its implementing regulations, and the relevant EPA guidance documents referenced in Section VI, Paragraph 1 of the Consent Order and any other guidances as may be identified to Respondents by EPA. A specific schedule for implementation of all activities shall be included in the RFI Workplan.

8. In performing the RFI Respondents need not repeat or duplicate investigations previously performed at the Facility or reproduce or resubmit data or reports previously submitted to EPA provided such data or reports accurately reflect current conditions at the Facility. If, in any Workplan submitted pursuant to this Consent Order, Respondents rely upon any previously submitted data or reports, Respondents shall identify the data or reports upon which Respondents relied and the date of its submission.

9. Upon EPA approval, Respondents shall implement the RFI Workplan in accordance with the approved time schedule and in a manner consistent with the RFI Scope of Work.

CORRECTIVE MEASURES STUDY

10. Upon completion of the RCRA Facility Investigation, the Respondents shall conduct a Corrective Measure Study (CMS) in accordance with the CMS Scope of Work in Attachment III attached hereto and incorporated by reference. A draft CMS Workplan shall be submitted by Respondents to EPA for review and approval within forty-five (45) days of receipt of EPA approval of the final RFI Report.

11. Upon EPA approval, Respondents shall implement the CMS Workplan in accordance with the approved time schedules and in a manner consistent with the CMS Scope of Work, Attachment III.

CORRECTIVE MEASURES IMPLEMENTATION

12. Upon EPA's selection of the corrective measure, if Respondents have complied with the terms of this Order, EPA shall provide a sixty (60) day period of negotiation of an administrative order on consent for implementation of the selected corrective measure. If agreement is not reached during this period, EPA reserves all rights it has to implement the corrective measure or other remedial response and to take any other appropriate actions under RCRA, CERCLA or any other available legal authority, including the issuance of a unilateral administrative order directing Respondents to implement the corrective measure. Nothing in this Consent Order shall be

construed as an obligation that Respondents implement any corrective measures at the Facility.

VII. SUBMISSIONS/AGENCY APPROVAL/ADDITIONAL WORK

1. Upon receipt of written notification of EPA approval or modification of any Workplan, Respondents shall commence work and implement the tasks required by the Workplans submitted pursuant to the Scope of Work contained in Attachments II and III in accordance with the standards, specifications and schedule stated in the Workplans as approved or modified by EPA.

2. Beginning with the tenth day of the third month following the effective date of this Consent Order, and on the tenth day of each second month thereafter during the pendancy of this Consent Order Respondents shall provide EPA with bi-monthly progress reports. The progress reports shall contain the following information:

A. A description of the work completed during the reporting period and an estimate of the percentage of the project completed;

B. A summary of all material findings made during the reporting period;

C. Summaries of all activities conducted and contacts made with government officials;

D. Summaries of material problems or potential problems encountered during the reporting period;

E. The projected work for the next reporting period;

F. Copies of daily reports and inspection reports;

G. To the extent known, notification specifying the dates in the next two months in which any sampling event will occur either on or off the facility; and

H. To the extent known, notification specifying the dates in the two months in which any drillings, borings, installation of equipment or sampling will occur on or off the facility.

3. Respondents shall provide draft and final reports and Workplans to EPA in accordance with the schedule contained in this Consent Order and its attachments.

4. EPA will review all draft and final reports, schedules and Workplans required to be submitted pursuant to this Consent Order, and notify Respondents in writing of EPA's approval/disapproval or modification of the report, workplan or any part thereof. Within forty-five (45) days of the receipt of a notice requiring a modification of any report or notice of EPA's disapproval of any report, Respondents shall amend and submit a revised report. In the event EPA disapproves or modifies a submission, EPA will provide Respondents with the basis for its decision in writing.

5. In the event a resubmitted report, schedule or Workplan is disapproved by EPA, EPA may again require Respondents to

correct the deficiencies. EPA also retains the right to require Respondents to modify the report, schedule or Workplan or modify the resubmission to cure the deficiency. Subject only to their right to invoke Dispute Resolution, Respondents shall implement any such report, schedule or Workplan as amended or developed by EPA. All reports, schedules, Workplans, specifications and attachments required by this Consent Order shall become part of this Consent Order upon written approval and/or modification thereof by EPA. Any noncompliance with such EPA-approved reports, schedules, Workplans, specifications and attachments shall be considered noncompliance with this Consent Order.

6. The Parties agree to make reasonable efforts to contact representatives of the other party or parties to facilitate compliance with the requirements hereunder, and to utilize informal communications, when appropriate, to minimize the possibility of dispute resolution or litigation in connection with this Consent Order regarding schedules, deadlines, status of work, the meaning or clarification of communications, reports, or comments in connection with the Consent Order.

7. Three (3) copies of all documents including Workplans, draft and final reports and bi-monthly progress reports, to be submitted pursuant to this Consent Order shall be hand-delivered or sent by certified mail, return receipt requested, to the Project Coordinator designated pursuant to Section XIII of this Consent Order. All other correspondence submitted to the Project Coordinator may be sent by regular United States mail.

8. All work performed pursuant to this Consent Order shall be under the direction and supervision of a professional engineer, geologist, environmental scientist or other qualified persons. As used in the preceding sentence, the term "other qualified persons" shall mean other qualified persons acceptable to EPA. Within thirty (30) days of the effective date of this Consent Order, Respondents shall notify EPA in writing of the name, title, and qualifications of this person. Respondents shall also notify EPA in writing of any contractors or subcontractors and their personnel to be used in carrying out the terms of this Consent Order within thirty (30) days of the effective date of this Consent Order, or within ten (10) days of the date of their selection, whichever is later.

9. During the pendancy of this Consent Order, EPA may determine that certain tasks, including investigatory work or engineering evaluation, are necessary in addition to the tasks and deliverables included in the IM Workplan or the RFI Workplan when new information indicates that such additional work is necessary. EPA will request in writing that Respondents perform the additional work in this situation and shall specify the basis and reasons for EPA's determination that the additional work is necessary. Within fifteen (15) days after the receipt of such request, Respondents shall have the opportunity to meet with EPA to discuss the additional work EPA has requested. If the parties agree to this additional work, an agreement to perform such

additional tasks will be executed in accordance with Section XXIII of this Consent Order (Subsequent Modification) and a workplan shall be submitted to EPA for approval. If the parties are unable to agree as to this additional work within twenty (20) days following the initial meeting with EPA, or if EPA disapproves of the submitted workplan for the additional work the disagreement shall be subject to the dispute resolution provisions of this Consent Order. Thereafter, Respondents shall perform the additional work according to the EPA approved Workplan. All additional work performed by Respondents under this paragraph shall be performed in a manner consistent with this Consent Order.

## VIII. QUALITY ASSURANCE

1. Throughout all sample collection and analysis activities, Respondents shall use EPA approved quality assurance, quality control, and chain-of-custody procedures as specified in the approved Workplans and Scopes of Work. In addition, Respondents shall:

A. Include a provision in contract with laboratories used by Respondents for analyses requiring those laboratories to perform such analyses according to the EPA methods included in "Test Methods for Evaluating Solid Waste (SW-846, November 1986) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondents shall submit all protocols to be used for analyses to EPA for approval within thirty (30) days prior to the commencement of analyses.

B. Include a provision in contracts with laboratories used by Respondents for analyses requiring those laboratories to participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analyses of samples provided by EPA to demonstrate the quality of the analytical data; and

C. Inform the EPA Project Coordinator thirty (30) days in advance of commencement of field work which laboratories will be used by Respondents. Additionally, ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analyses.

D. Use the EPA guidance to evaluate all data to be used in the proposed plans required by Section VI of this Consent Order.

## IX. PUBLIC COMMENT AND PARTICIPATION

1. Upon approval by EPA of the Corrective Measure Study Final Report, EPA shall make the RCRA Facility Investigation Final Report, the Corrective Measure Study Final Report, a summary of EPA's proposed corrective measure and EPA's justification for proposing selection of that corrective measure available to the public for review and comment for at least twenty-one (21) days. These items will be included in the Administrative Record referenced in Paragraph 3 of this Section.

2. Following the public review and comment period, EPA shall notify Respondents of the corrective measure selected by

EPA. If the corrective measure recommended in the Corrective Measure Study Final Report is not the corrective measure selected by EPA after consideration of public comments, EPA shall inform Respondents in writing of the reasons for such decision. EPA will require Respondents to perform additional work pursuant to the terms of this Consent Order if, based on public comments, EPA determines that such additional work is necessary.

3. The Administrative Record supporting the selection of the corrective measure will be available for public review at the EPA Region VII library, located at 726 Minnesota Avenue, Kansas City, Kansas 66101, from 8:00 a.m. to 4:30 p.m. Monday through Friday as well as at the Keokuk Public Library, 210 N. 5th Street, Keokuk, Iowa 53632 during normal working hours.

## X. ON-SITE AND OFF-SITE ACCESS

1. EPA and/or any EPA representative are authorized to enter and freely move about all property at the Facility at reasonable times during the pendency of this Consent Order, under escort, after they have identified themselves and the purpose for being on the property at the main office of Schlegel Sealing Systems, Inc., for the purposes of, inter alia: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to this Consent Order; reviewing the progress of the Respondents in carrying out the terms of this Consent Order; conducting such tests, sampling or monitoring related to the oversight of enforcement of this Consent Order as

EPA or its Project Coordinator deem necessary; using a camera, sound recording, or other documentary type equipment to oversee or enforce this Consent Order; and verifying the reports and data submitted to EPA by the Respondents. Subject to the requirements of Section XI regarding Confidential Business Information, Respondents shall permit such persons to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data pertaining to work undertaken pursuant to this Consent Order. Nothing herein shall authorize access to, or inspection or copying of any attorney-client communications or material subject to the attorney work product privilege. Respondents shall have the right to recommend appropriate knowledgeable facility personnel or contractors for interviews performed under this section and, upon reasonable notice, to designate a knowledgeable representative to be present during such interviews. The unavailability of any representative designated by Respondents shall not constitute a basis for delay or rescheduling of interviews. If EPA or an EPA representative obtains any samples prior to leaving the Facility, he or she shall provide the Respondents a receipt describing the samples obtained and, if requested, a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the Respondents. EPA and EPA contractors shall observe all applicable EPA and OSHA safety requirements. The Respondents shall comply with all approved

health and safety plans.

2. To the extent that work required by this Consent Order, or by any approved Scope of Work or Workplan prepared pursuant hereto, must be done on property not owned or controlled by Respondents, Respondents shall use their best efforts to obtain site access agreements from the present owner(s) of such property within thirty (30) days of approval of any Workplan for which site access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondents to the present owners of such property requesting access agreements to permit Respondents and EPA and its authorized representatives to access such property. Any such access agreement shall be incorporated by reference into this Consent Order. In the event that agreements for access are not obtained, Respondents shall notify EPA in writing within ten (10) days thereafter regarding both the efforts undertaken to obtain access and their failure to obtain such agreements. Following notice by Respondents of the exhaustion of their good faith efforts to obtain such access without success, EPA shall determine whether to utilize its statutory authority to seek access and shall notify Respondents of the decision whether or not to seek access. Thereafter, in the event EPA obtains access, Respondents shall undertake EPA approved work on such property.

3. Nothing in this section limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

## XI. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. Respondents shall submit to EPA the results of all sampling and/or tests or other data generated by, or on behalf of the Respondents, in accordance with the requirements of this Consent Order within sixty (60) days of the sampling event. The term "sampling event" as used in the preceding sentence shall mean any continuous mobilization of work crews which perform activities consisting of the collection of samples for chemical analysis.

2. Respondents shall notify EPA at least ten (10) days before engaging in any field activities, such as well drilling, installation of equipment, or sampling. EPA may agree to lesser notice under appropriate circumstances. At the request of EPA, Respondents shall provide or allow EPA or its authorized representative at EPA's cost to take split samples of all samples collected by Respondents pursuant to this Consent Order. Similarly, at the request of Respondents, EPA shall allow Respondents or their authorized representatives, at their own cost, to take split or duplicate samples of all samples collected by EPA under this Consent Order. EPA will notify Respondents at least ten (10) days before conducting any sampling under this Consent Order.

3. Respondents may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Consent Order or obtained by EPA during the course of an inspection of Respondent's Facility. Any assertion of

confidentiality shall be pursuant to 40 C.F.R. Part 2, Subpart B. Information determined to be confidential by EPA shall be disclosed only to the extent permitted by 40 C.F.R. Part 2. Allegedly confidential portions of otherwise non-confidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by EPA. If no such confidentiality claim accompanies the information when it is submitted to EPA, the information may be made available to the public by EPA without further notice to Respondents. In no event shall physical or analytical data be deemed confidential.

## XII. RECORD PRESERVATION

1. Respondents shall preserve, during the pendency of this Consent Order and for a minimum of eight (8) years after its termination, all data, records and documents in its possession or in the possession of its divisions, officers, directors, employees, agents, contractors, successors and assigns which relate in any way to this Consent Order. Eight (8) years after termination of this Consent Order, Respondents shall, upon request, make such records available to EPA for inspection or shall provide copies of any such records to EPA. Respondents shall notify EPA thirty (30) days prior to the destruction of any such records, and shall provide EPA with the opportunity to take possession of any such records.

## XIII. PROJECT COORDINATOR

1. Within ten (10) days of the effective date of this Consent Order, Respondents shall designate a Project Coordinator.

Respondents shall notify EPA in writing of the Project Coordinator it has selected. The EPA Project Coordinator shall be Tran Tran. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. All communications between Respondents and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order shall be directed through the Project Coordinators.

2. The Respondents and EPA shall provide each other at least ten (10) days written notice after changing their Project Coordinator.

3. If EPA determines that activities in compliance or noncompliance with this Consent Order have caused or may cause a release of hazardous waste, hazardous constituent(s), or pollutant(s) or contaminant(s), or a threat to human health and/or the environment, or that Respondents are not capable of undertaking any studies or corrective measures ordered, EPA may order Respondents to stop further implementation of this Consent Order for such period of time as may be needed to abate any such release or threat and/or to undertake any action which EPA determines is necessary to abate such release or threat. In the event that the stop work order continues in force longer than five (5) days, EPA shall notify the Respondents at the end of the five (5) day period in writing of the reasons for the decision to continue the order to stop work and the estimated time before work can recommence.

4. The absence of the EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

## XIV. NOTIFICATION

1. Three copies of all reports, workplans, statements of work, correspondence, approvals, disapprovals, notice or other submissions relating to or required under this Consent Order to be provided by Respondents to EPA shall be sent to:

Tran Tran
RCRA/IOWA
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

Documents to be submitted to Respondents shall be sent to:

Sheller-Globe Corporation
c/o United Technologies Corporation
Attn: Brian J. Yeich
United Technologies Building
Hartford, Connecticut 06101

with a copy to:

Joseph A. Gregg, Esq.
Eastman & Smith
800 United Savings Building
Toledo, Ohio 43604

and to:

Schlegel Sealing Systems, Inc.
Attn: Harold Gibson
1555 Jefferson Road
P.O. Box 23197
Rochester, New York 14692-3197

with a copy to:

Dale Guariglia, Esq.
Bryan, Cave, McPheeters and McRoberts
500 North Broadway
St. Louis, Missouri 63102-2136

2. Any notices or submissions required by this Consent Order shall be deemed delivered when hand delivered by the due date, or when placed in the United States mail or overnight courier, postage prepaid, as certified by the sender. All response periods are triggered by Respondents' actual receipt of a required notice or submittal.

XV. DELAY IN PERFORMANCE/STIPULATED PENALTIES

1. Unless there has been a written extension of a compliance date by EPA, or excusable delay as defined under Section XVI, the "Force Majeure and Excusable Delay" provision, in the event Respondents fail to meet any requirement set forth below, Respondents shall pay stipulated penalties as set forth below. Compliance by Respondents shall include completion of an activity under this Consent Order or a plan approved under this Consent Order or any matter under this Consent Order within the specified time schedules in and approved under this Consent Order.

A. For failure to submit the draft or final Description of Current Conditions, Pre-Investigation Evaluation of Corrective Measures Technologies, or Laboratory and Bench Scale Study Workplan or Report, in accordance with the schedules set forth in this Consent Order, penalties shall accrue in the amount of $250 per day for the first ten (10) days of noncompliance; $500 per day for the second ten (10) days of noncompliance; and $750 for each subsequent day of noncompliance;

B. For failure to submit the draft or final RFI or CMS Workplan or Report or the draft or final Interim Measures Workplan, if necessary, in accordance with the schedules set forth in this Consent Order, penalties shall accrue in the amount of $750 per day for the first ten (10) days of noncompliance; $1,500 per day for the second ten (10) days of noncompliance; and $3,000 per day for each subsequent day of noncompliance;

C. For failure to submit the bi-monthly Progress Reports as required in this Consent Order, penalties shall accrue in the amount of $200 per day for the first (10) days of noncompliance; $300 per day for the second ten (10) days of noncompliance; and $500 per day for each subsequent day of noncompliance.

2. All penalties shall begin to accrue on the first work day after complete performance is due or a violation occurs, and shall continue to accrue through the final day or correction of noncompliance. For purposes of this Section, "days" shall be defined as business days, excluding Saturdays, Sundays and federal holidays and delivery shall be made by hand-delivery or placing in the United States mail or overnight courier, postage prepaid, as certified by sender. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order.

3. All penalties owed to EPA under this Section shall be due within thirty (30) days of a notification of a receipt of noncompliance. Such notification shall describe the

noncompliance, the date the noncompliance began, the date compliance resumed or Respondents were otherwise excused from compliance, and shall indicate the amount of the penalties due. Interest shall begin to accrue on the unpaid balance at the end of the thirty (30) day period.

4. All penalties shall be payable by certified or cashier's check to the Treasurer of the United States of America and shall be remitted to Mellon Bank, EPA, Region VII, P.O. Box 360748M, Pittsburgh, Pennsylvania 15251. All payments shall reference the name of the facility, the Respondents' names and addresses, and the EPA Docket Number of this action. Copies of the transmittal of payment shall be sent simultaneously to the EPA Project Coordinator.

5. Respondents may dispute EPA's right to the stated amount of the penalties by invoking the dispute resolution procedures under Section XV of this Consent Order. If Respondents do not prevail upon resolution of the dispute, EPA has the right to collect all penalties which accrued prior to and during the period of the dispute, however, in determining the amount of the penalty to be assessed, the RCRA Branch Chief, EPA Region VII, may take into account the good faith of Respondents in invoking Dispute Resolution Procedures. If Respondents prevail upon resolution of the dispute, no penalties shall be payable and any affected deadlines shall be extended as provided in Section XV, Paragraph 2, Dispute Resolution.

6. Neither the filing of a petition to resolve a dispute nor the payment of penalties shall alter in any way Respondent's obligations to complete the performance required hereunder.

7. The stipulated penalties set forth in this Section do not preclude EPA from pursuing other remedies or sanctions, which may be available to EPA by reason of Respondents failure to comply with any of the requirements of this Consent Order. Provided, however, EPA shall be precluded from seeking other judicial or administrative penalties for those violations designated in Paragraph 1 of this Section unless Respondents fail or refuse to pay penalties assessed pursuant to this Section, in which case nothing shall preclude EPA from seeking judicial or administrative penalties.

8. Deadlines for completion of requirements which are the subject of Stipulated Penalties under this Consent Order may be extended by mutual agreement of the parties in accordance with Section XXIII, "Subsequent Modification." Furthermore, EPA ,may, at its discretion, waive any stipulated penalties which may be due under this provision.

## XVI. DISPUTE RESOLUTION

1. If Respondents, or either of them disagree in whole or part, with any EPA disapproval or modification or other decision or directive made by EPA pursuant to this Consent Order, Respondent(s) shall notify EPA in writing of their objections and the basis therefore within fourteen (14) calendar days of receipt of EPA's disapproval, modification, decision or directive. Said

notice shall define the dispute, state the basis of Respondent's objections, and be sent certified mail, return receipt requested. EPA and Respondent(s) shall then have an additional ten (10) calendar days to reach agreement. If agreement is reached, the resolution shall be reduced to writing, signed by representatives of each party and incorporated into this Consent Order. If agreement is not reached within this ten day period, the representative of each party shall present their respective positions in writing to the RCRA Branch Chief, EPA Region VII within fourteen (14) days. The RCRA Branch Chief, EPA Region VII shall provide a written statement of the decision to the parties which shall be incorporated into this Consent Order.

2. The existence of a dispute as defined herein and EPA's consideration of such matters placed in dispute shall not excuse, toll or suspend any compliance obligation or deadline required pursuant to this Consent Order during the pendency of the Dispute Resolution process unless mutually agreed upon. Further, invocation of dispute resolution does not stay stipulated penalties under this Order. However, if Respondent(s) prevail in the dispute, deadlines directly affected by the matter in dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute in accordance with the procedures specified herein plus reasonable time necessary for mobilization as determined by EPA.

3. In an action by EPA to compel compliance with or otherwise enforce a requirement of this Consent Order which was the

subject of Dispute Resolution under Paragraph 1 above, Respondent(s) may defend themselves on the same basis and to the same extent that they could in the absence of this Dispute Resolution Section. Furthermore, in such an action, unless the dispute was resolved by agreement of the parties, Respondents shall not be deemed to have consented to the decision of the RCRA Branch Chief, EPA Region VII.

4. This Dispute Resolution procedure shall not preclude any party from having direct recourse to a Court if otherwise available by applicable law. However, it is EPA's position that no such recourse is available to Respondents under any law.

## XVII. FORCE MAJEURE AND EXCUSABLE DELAY

1. Respondents shall perform the requirements of this Consent Order within the time limits set forth herein, unless performance is prevented or delayed by events which constitute a force majeure. Respondents shall have the burden of proving such force majeure. Force Majeure, for purpose of this Consent Order, is defined as any event arising from causes beyond the control of Respondents and any entities controlled by Respondents including their contractors and subcontractors that delays the timely performance of any obligation under this Consent Order, notwithstanding Respondents' best efforts to avoid the delay. The requirement that Respondents exercise "best efforts to avoid the delay" includes using best efforts to anticipate any potential force majeure event (1) as it is occurring and (2) following the potential force majeure event, such that the delay

is minimized to the greatest extent practicable. Examples of events that are not force majeure events include increased costs of performance, changed economic circumstances, normal precipitation events, or failure to obtain federal, state or local permits as a result of Respondents failure to timely submit any required application and documentation.

2. Respondents shall notify EPA in writing within five (5) business days after they became aware of events which they know or should know constitute a force majeure. Such notice shall estimate the anticipated length of delay, including necessary mobilization and remobilization, its cause, measures taken or to be taken to minimize the delay, and an estimated timetable for implementation of these measures. Respondents shall exercise their best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the notice provisions of this section shall constitute a waiver of Respondents right to assert a force majeure.

3. If EPA determines the delay has been or will be caused by a force majeure, the time for performance for that element of the relevant Scopes of Work or Workplans shall be extended for a period equal to the delay resulting from such circumstances plus reasonable time necessary for remobilization as determined by EPA. This shall be accomplished through an amendment to the Consent Order pursuant to Section XXI. Such an extension does not alter the schedule for performance or completion of other tasks required by this Consent Order or any Work Plan unless

these are also specifically altered by amendment of the Consent Order. In the event that EPA and Respondents cannot agree that any delay or failure has been or will be caused by a force majeure, or if there is no agreement on the length of the extension, the dispute shall be resolved in accordance with the Dispute Resolution provisions of Section XVI of this Consent Order.

## XVIII. RESERVATION OF RIGHTS

1. Unless otherwise expressly waived in this Consent Order, the parties reserve all their respective rights and remedies, both legal and equitable.

2. EPA expressly reserves all rights and defenses that it may have including the right both to disapprove of work performed by Respondents pursuant to this Consent Order and to request, pursuant to this Consent Order, that Respondents perform tasks in addition to those stated in this Consent Order or any approved Work Plans and Scopes of Work.

3. Consistent with the terms of this Consent Order, and except as provided in Paragraph 7 of Section XV of this Consent Order (Delay in Performance/Stipulated Penalties), EPA hereby reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondents' failure to comply with any of the requirements of this Consent Order including without limitation the assessment of penalties under § 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2). This Consent Order shall not be construed as a covenant not to

sue, release, waiver, or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.

4. Compliance by Respondents with the terms of this Order shall not relieve Respondents of their obligations to comply with RCRA or any other applicable local, state, or Federal laws and regulations.

5. This Consent Order shall not limit or otherwise preclude the Agency from taking additional enforcement action pursuant to § 3008(h) of RCRA, 42 U.S.C. § 6928(h)(2), or other available legal authorities should the EPA determine that such actions are warranted.

6. This Consent Order is not intended to be, nor shall it be, construed as a permit. This Consent Order does not relieve Respondents of any obligation to obtain and comply with any local, state or Federal permits.

7. EPA reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and response/corrective actions as it deems necessary to protect human health and/or the environment if Respondents fail to perform any work consented to herein or any additional site characterization, CMS and response corrective actions deemed necessary to protect public health and the environment in a timely and satisfactory manner. In the event Respondents fail to perform work consented to herein, and EPA

concludes that response action is necessary to protect public health and the environment, EPA may exercise its authority under CERCLA, to undertake removal or remedial actions at any time. If EPA decides to exercise its authority under CERCLA, to the extent practicable, an effort will be made to determine whether Respondents can and will perform the necessary response action(s) promptly and properly. In any event, EPA reserves its right to seek reimbursement from Respondents for such additional costs incurred by the United States. Notwithstanding compliance with the terms of this Consent Order, Respondents are not released from liability, if any, for the costs of any response actions taken or authorized by EPA.

8. Respondents do not admit the validity of, or responsibility for, any factual or legal conclusions or determinations stated herein and do not admit any violations of or liability under any federal, state or common law, or any other liability of any kind; nor do Respondents admit the existence of any actual or potential danger, hazard, or harm to any person, property, political entity, agency, the environment, or the public health or welfare. Respondents agree that this Consent Order shall be admissible in a proceeding brought by EPA to enforce this Consent Order but all parties agree that this Consent Order shall not constitute or be construed as an admission or be admissible as evidence of any admission on the part of Respondents, in whole or part, and any other administrative or judicial proceedings.

## XIX. OTHER CLAIMS

1. Nothing in this Consent Order shall constitute or be construed as a release by any party bound by this Consent Order from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Facility.

## XX. OTHER APPLICABLE LAWS

1. All actions required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable local, state, and Federal laws and regulations. Respondents shall obtain or cause their representatives to obtain all permits and approvals necessary under such laws and regulations.

## XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

1. Respondents agree to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of Respondents or their agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Consent Order. Such indemnification by Respondents includes any work conducted by Respondents under the terms of this Consent

Order on property not owned or controlled by Respondents. Neither the United States government nor any of its agencies, departments, agents, employees or contractors shall be represented, held out, construed or deemed to be a party to any contract, agreement, understanding or arrangement by Respondents in carrying out any activity, task or obligation pursuant to this Consent Order. Respondents shall be under no duty to indemnify the United States for claims or causes of action arising from or on account of negligent, willful, or intentional acts of the United States, its officers, agents, employees, or any other person acting on its behalf. Nothing herein is intended or shall be construed as extending the liability of the United States beyond that provided for under federal law.

XXII. FINANCIAL RESPONSIBILITY

1. Within thirty (30) days of the effective date of this Consent Order SGC shall submit to EPA for approval a cost estimate for implementation of this Consent Order. EPA approval pursuant to this Section shall be subject to the Dispute Resolution Provisions of this Consent Order. The cost estimate shall include direct and indirect capital cost operation and maintenance costs and any other costs attributable to the implementation of the requirements of this Consent Order. SGC shall also submit all documentation supporting the cost estimate. In the event EPA disapproves SGC's cost estimate, SGC shall submit a revised cost estimate within ten (10) days of EPA disapproval.

2. Within thirty (30) days of EPA approval of the cost estimate, SGC shall submit documentation of financial assurance in the amount equal to the amount approved by EPA to guarantee completion of the work required pursuant to this Consent Order. Said financial assurance shall be in any one or a combination of the following, and shall be consistent with the provisions of this Consent Order and 40 C.F.R. Part 265, Subpart H:

a. a performance or surety bond;

b. a letter of credit; and/or

c. a trust fund.

3. If EPA determines at anytime that Respondents have defaulted in their responsibilities with respect to the Consent Order, EPA may undertake to complete said tasks, utilizing the proceeds of the foregoing.

4. On each anniversary of the effective date of this Consent Order, SGC shall submit to EPA for approval, a cost estimate (annual cost estimate) for the work remaining to be implemented pursuant to this Consent Order. The annual cost estimate shall include the same information as the cost estimate in Paragraph 1 of this Section as well as all supporting documentation. In the event EPA disapproves an annual cost estimate, SGC shall submit a revised cost estimate within ten (10) days of EPA disapproval.

5. In the event that an annual cost estimate approved by EPA pursuant to Paragraph 4 of this Section is higher than any previously approved cost estimate, within thirty (30) days of EPA

approval of the annual cost estimate, SGC shall submit documentation of financial assurance in an amount equal to that approved by EPA. Said financial assurance shall be in any one or a combination of the forms prescribed in Paragraph 2 of this Section and shall be consistent with the provisions of this Consent Order and 40 C.F.R. Part 265, Subpart H.

## XXIII. SUBSEQUENT MODIFICATION

1. This Consent Order may only be amended by mutual agreement of EPA and Respondents. Such amendments shall be in writing, shall be signed by both parties and shall have as their effective date the date specified therein, and shall be incorporated into this Consent Order.

2. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondents will be construed as relieving Respondents of their obligation to obtain written approval, if and when required by this Consent Order.

## XXIV. SEVERABILITY

1. If any provision or authority of this Consent Order or the application of this Consent Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Consent Order shall remain in force and shall not be affected thereby.

XXV. TERMINATION AND SATISFACTION

1. The provisions of this Consent Order shall be deemed satisfied upon Respondents' receipt of written notice from EPA that Respondents have demonstrated, to the satisfaction of EPA, that the terms of this Consent Order including any additional tasks determined by EPA to be required pursuant to this Consent Order, or any continuing obligation or requirements (but not including the record preservation requirements of Section XII of this Consent Order), have been satisfactorily completed.

XXVI. EFFECTIVE DATE

1. This Consent Order shall be effective upon receipt by Respondents of a fully executed duplicate original of this Consent Order. All times for performance and compliance begin to run from the effective date of the Consent Order. Because the Order was issued with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. § 6928(b)

Date: 9/30/91

David A. Wagoner
Director, Waste Management Division
U.S. EPA, Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101
(913) 551-7671

Date: 9/30/91

Douglas C. Walther
Assistant Regional Counsel
U.S. EPA, Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101
(913) 551-7735

Signature page to Consent Order between United States Environmental Protection Agency, Region VII

and

Schlegel Sealing Systems, Inc., dated September 30, 1991.

SCHLEGEL SEALING SYSTEMS, INC.

Date: September 30, 1991

By: Gregory J. Murrer, Secretary

TOTAL P.02

Signature page to Consent Order between the United States Environmental Protection Agency, Region VII

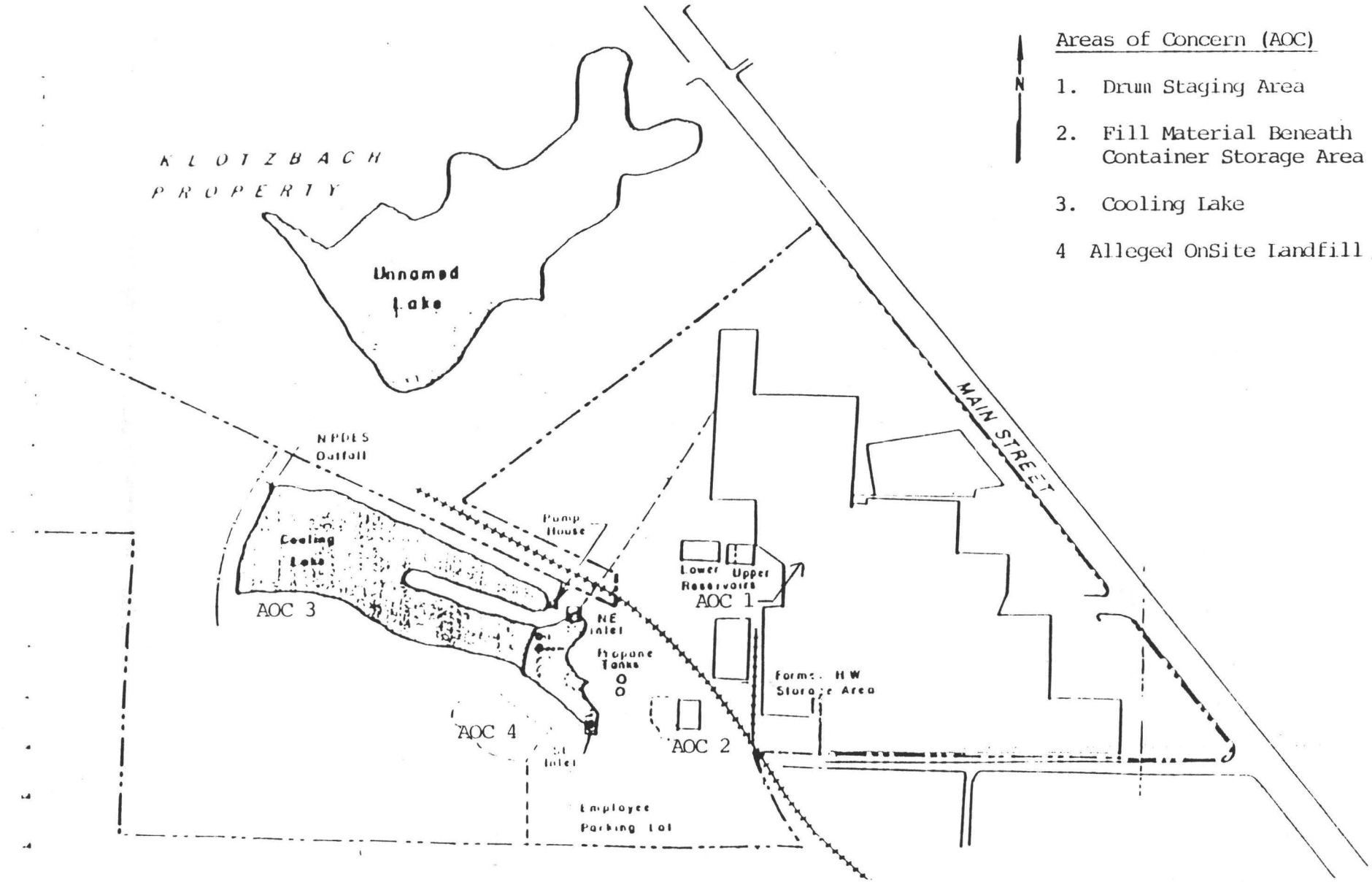
and

Sheller-Globe Corporation dated September 30, 1991.

SHELLER-GLOBE CORPORATION*

Date: September 30, 1991 By: William F. Leitin

*Sheller-Globe Corporation changed its name to "United Technologies Automotive Systems, Inc.," effective August 12, 1991. This company continues to exist as a legally separate and distinct corporation from United Technologies Automotive, Inc.


Areas of Concern (AOC)
1. Drum Staging Area
2. Fill Material Beneath Container Storage Area
3. Cooling Lake
4 Alleged OnSite Landfill
N
KLOTZBACH PROPERTY
Unnamed Lake
NPDES Outfall
Pump House
Cooling Lake
AOC 3
NE Inlet
Propane Tanks
AOC 4
Inlet
AOC 2
Lower Upper Reservoirs
AOC 1
Former HW Storage Area
MAIN STREET
Employee Parking Lot

ATTACHMENT II

Scope of Work for a RCRA Facility Investigation (RFI)

The purpose of the RCRA Facility Investigation is to determine the nature and extent of releases of hazardous waste or hazardous constituents from regulated units, solid waste management units, and other source areas at the facility and to gather all necessary data to support the Corrective Measures Study. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RCRA Facility Investigation at the facility.

**SCOPE** - The RCRA Facility Investigation consists of seven tasks:

Task I: Description of Current Conditions;

Task II: Pre-Investigation Evaluation of Corrective Measure Technologies

Task III: RFI Workplan Requirements;

Task IV: Facility Investigation;

Task V: Investigation Analysis;

Task VI: Laboratory and Bench-Scale Studies; and

Task VII. Reports.

**TASK I::** Description of Current Conditions

Facility Background:

1. The Respondent's Current Condition Report (CCR) report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. Respondent may use and compile the information contained within documents and reports previously submitted to EPA to satisfy this requirement provided the documents and reports accurately reflect the conditions at the facility. The Respondent's CCR report shall include to the extent reasonably available to Respondents from existing information:

A. Maps depicting the following:

1. General Geographic location;

2. Property lines, with the owners of immediately adjacent property clearly indicated;

3. General topography and surface drainage in the immediate vicinity of the Facility depicting waterways, wetlands, floodplains, water features, drainage patterns, and surface-water containment areas;

4. Tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;

5. Solid or hazardous waste treatment, storage, or disposal areas active after November 19, 1980;

6. Known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980;

7. The general areas of known past and present product and waste underground tanks and piping;

8. Surrounding land uses (residential, commercial, agricultural, recreational); and

9. The location of all water supply and water production wells in the immediate vicinity of the facility. These wells shall be clearly labeled and ground and top of casing elevations and construction details included when available from existing information (these elevations and details may be included as an attachment).

B. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;

C. Approximate dates and periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or federal response units or private parties) including any inspection reports or technical reports generated as a result of the response as available to Respondent; and

D. A summary of past permits requested and/or received, any enforcement actions involving hazardous waste and hazardous constituents and their subsequent responses and a list of documents and studies prepared for the facility.

Nature and Extent of Contamination:

1. The Respondent's CCR report shall summarize known or suspected areas of contamination. This should include all known regulated units, known solid waste management units, spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following, to the extent that the information is reasonably available to the Respondent from existing information:

A. Location of unit/area (which shall be depicted on a facility map);

B. Quantities of solid and hazardous wastes spilled or managed;

C. Hazardous waste or hazardous constituents, to the extent known; and

D. Identification of areas where additional information is necessary.

2. The Respondent's CCR report shall prepare include an assessment and description of the currently known degree and extent of contamination. This should include:

A. Available monitoring data and qualitative information on locations and levels of contamination at the facility;

B. Potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, and meteorology; and

C. The potential impact(s) on human health and the environment including demography, ground water and surface water use, and land use.

**TASK II:** Pre-Investigation Evaluation of Corrective Measures Technologies

1. Prior to starting the facility investigation, the Respondent shall submit to EPA a report that identifies the potential corrective measures technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of potential contamination related to facility operations. This report shall also identify any field data that needs to be collected in the facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e. g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

**TASK III:** RFI Workplan Requirements

Respondent shall prepare an RFI Workplan, which shall include the development of several plans concurrently. During the RFI, it may be necessary to revise the RFI Workplan to increase or decrease the detail of information collected to accommodate the facility specific situation. The initial part of this RFI will be focussed on the facility property. If results of this portion of the investigation indicate off-site migration of hazardous waste constituents, Respondent shall conduct off-site investigations as part of this RFI. The RFI may use existing public information as well as information collected from the field investigation. The RFI shall include the following components:

Project Management Plan:

1. The Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, and personnel. The Project Management Plan will also include a description of qualifications of key personnel performing or directing the RFI including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

Data Collection Quality Assurance Plan:

1. The Respondent shall prepare a plan to document all monitoring procedures such as: sampling, field measurements and sample analysis performed during the investigation to characterize the environmental setting, source, and contamination so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

A. Data Collection Strategy: The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

1. Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;

2. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;

3. Description of the rationale used to assure that the data accurately and precisely represent a characteristic

of a population, parameter variations at a sampling point, a process condition or an environmental condition. Examples of factors which shall be considered and discussed include:

a) Environmental conditions at the time of sampling;

b) Number of sampling points;

c) Representativeness of selected media; and

d) Representativeness of selected analytical parameters.

4. Description of the measures to be taken to assure that the following data sets can be compared to each other:

a) RFI data generated by the Respondent during the time period of the RFI/CMS;

b) RFI data generated by an outside laboratory or consultant versus data generated by the Respondent; and

c) Data generated by separate consultants or laboratories.

5. Details relating to the schedule and information to be provided in quality assurance reports. The reports should include but not be limited to:

a) Periodic assessment of measurement data accuracy, precision, and completeness;

b) Results of performance audits;

c) Results of system audits;

d) Significant quality assurance problems and recommended solutions; and

e) Resolutions of previously stated problems.

B. The sampling section of the Data Collection Quality Assurance Plan shall discuss:

1. Selecting appropriate sampling locations, depths, etc.;

2. Providing a statistically sufficient number of sampling sites;

3. Determining conditions under which sampling should be conducted;

4. Determining which media are to be sampled (e.g. ground water, air, soil, sediment, etc.);

5. Determining which parameters are to be measured and where;

6. Selecting the frequency of sampling and length of sampling period;

7. Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;

8. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;

9. Documenting field sampling operations and procedures including:

a) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);

b) Procedures and forms for recording location and specific considerations associated with sample acquisition;

c) Documentation of specific sample preservation methods;

d) Calibration of field devices;

e) Collection of replicate samples;

f) Submission of field-biased blanks, where appropriate;

g) Potential interferences present at the facility;

h) Construction materials and techniques, associated with monitoring wells and piezometers;

i) Field equipment listing and sample containers;

j) Sampling order; and

k) Decontamination procedures.

10. Selecting appropriate sample containers;

11. Sample preservation; and

12. Chain-of-custody, including:

a) Standardized field tracking and reporting forms to establish sample custody in the field prior to and during shipment; and

b) Examples of pre-prepared sample labels containing information necessary for effective sample tracking.

C. The Field Measurements section of the Data Collection Quality Assurance Plan shall discuss:

1. Selecting appropriate field measurement locations, depths, etc.;

2. Providing a statistically sufficient number of field measurements;

3. Determining conditions under which field measurements should be conducted;

4. Determining which media are to be addressed by appropriate field measurements (e. g., ground water, soil, sediment, etc.);

5. Determining which parameters are to be measured and where;

6. Selecting the frequency of field measurements and length of field measurement period; and

7. Documenting field measurement operations and procedures, including:

a) Procedures and forms for recording raw data and the location, time, and facility-specific considerations associated with the data acquisition;

b) Calibration of field devices;

c) Collection of replicate measurements;

d) Submission of field-biased blanks, where appropriate;

e) Potential interferences present at the facility;

f) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;

g) Field equipment listing;

h) Order in which field measurements were made; and

i) Decontamination procedures.

D. The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following (standard laboratory operation procedures and analytical methodologies may be referenced, as appropriate, to aid in the presentation of the information):

1. Chain-of-custody procedures, including:

a) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples; obtain documents of shipments, and verify the data entered onto the sample custody records;

b) Provision for a laboratory sample custody log consisting of serially numbered standard lab tracking report sheets; and

c) Specification of laboratory sample custody procedures for sample handling, storage, and dispersement for analysis.

2. Sample storage procedures and storage times;

3. Sample preparation methods;

4. Analytical procedures, including:

a) Scope and application of the procedure;

b) Sample matrix;

c) Potential interferences;

d) Precision and accuracy of the methodology; and

e) Method detection limits.

5. Calibration procedures and frequency;

6. Data reduction, validation and reporting;

7. Internal quality control checks, laboratory performance and system audits and frequency, including:

a) Method blank(s);

b) Laboratory control sample(s);

c) Calibration check sample(s);

d) Replicate sample(s);

e) Matrix-spiked sample(s);

f) "Blind" quality control sample(s);

g) Control charts;

h) Surrogate samples;

i) Zero and span gases; and

j) Reagent quality control checks.

8. Preventative maintenance procedures and schedules;

9. Corrective action (for laboratory problems); and

10. Sample turnaround time.

Data Management Plan:

1. The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

A. The data record shall include the following:

1. Unique sample or field measurement code;

2. Sampling or field measurement location and sample or measurement type;

3. Sampling or field measurement raw data;

4. Laboratory analysis ID number;

5. Property or component measured; and

6. Results of analysis (e.g., concentration).

B. The following data may be presented in tabular displays:

1. Unsorted (raw) data;

2. Results for each medium, or for each constituent monitored;

3. Data reduction for statistical analysis;

4. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and

5. Summary data.

C. The following data may be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.);

1. Display sampling location and sampling grids;

2. Indicate boundaries of sampling area and areas where more data are required;

3. Displays levels of contamination at each sampling location;

4. Display geographical extent of contamination;

5. Display contamination levels, averages, and maxima;

6. Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and

7. Indicate features affecting intramedia transport and show potential receptors.

Health and Safety Plan:

1. The Respondent shall prepare a Health and Safety Plan [for the RFI/CMS]. The Health and Safety Plan is subject to review and comment, but not approval, by EPA.

A. Major elements of the Health and Safety Plan shall include:

1. Facility description including availability of resources such as roads, water supply, electricity and telephone service;

2. Description of the known hazards and evaluation of the risks associated with each activity conducted;

3. A listing of key personnel and alternates responsible for site safety, response operations, and for protection of public health;

4. Delineation of work areas;

5. Description of levels of protection to be worn by personnel in work areas;

6. Establishment of procedures to control site access;

7. Description of decontamination procedure for personnel and equipment;

8. Establishment of site emergency procedures;

9. Emergency medical care for injuries and toxicological problems; and

10. Establishment of procedures for protecting workers from weather-related problems.

B. The RFI/CMS Health and Safety Plan shall be consistent with:

1. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);

2. EPA Order 1440.1 - Respiratory Protection;

3. EPA Order 1440.3 - Health and Safety Requirements for Employees Engaged in Field Activities;

4. Facility Contingency Plan;

5. EPA Standard Operating Safety Guide (1984);

6. OSHA regulations particularly in 29 CFR 1910 and 1926;

7. State and local regulations; and

8. Other EPA guidances including the RFI guidance as provided.

**TASK IV.** Facility Investigation

The Respondent shall conduct those investigations described in the RFI Workplan and subsequent revisions thereto necessary to characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to support the development and evaluation of

corrective measure alternative or alternatives during the Corrective Measures Study.

Environmental Setting:

1. The Respondent shall collect information to supplement and verify existing information on the environmental setting at the facility. The Respondent shall characterize the following:

A. The Respondent shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

1. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting ground water flow beneath the facility that would be potentially impacted by the facility operation, including:

a) Regional and facility specific stratigraphy as necessary to characterize site conditions;

b) Structural geology as necessary to characterize site conditions;

c) Identification and characterization of areas and amounts of recharge and discharge;

d) Available regional groundwater flow pattern information] and facility specific ground water flow patterns; and

e) Characterization of the seasonal variations in the ground water flow regime.

2. An analysis of any topographic features that might influence the ground water flow system.

3. Based on available literature and field data, a representative classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:

a) Hydraulic conductivity and porosity;

b) Lithology, grain size, sorting, degree of cementation;

c) An interpretation of hydraulic interconnections between saturated zones; and

d) General attenuation mechanisms of the natural earth materials.

4. Based on available literature and field studies, structural geology and hydrogeologic cross-sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:

a) Known sand and gravel deposits in unconsolidated deposits, if present;

b) Known zones of fracturing or channeling in consolidated or unconsolidated deposits, if present;

c) Known zones of higher permeability or low permeability that might direct and restrict the flow of contaminants;

d) The upper most aquifer: geologic formation, group of formations, or part of a formation capable yielding a significant amount of ground water to wells or springs; and

e) Water-bearing zones above the first confining layer that may serve as a pathway for contaminant migration including perched zones of saturation.

5. Based on data obtained from ground water monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:

a) Water-level contour and/or potentiometric maps;

b) Hydrologic cross-sections showing vertical gradients;

c) The flow system, including the vertical and horizontal components of flow; and

d) Any observed temporal changes in hydraulic gradients.

6. A description of known man-made influences that may affect the hydrogeology of the site, identifying:

a) Active and inactive local water-supply and production wells with an approximate schedule of pumping, if available; and

b) Man-made hydraulic structures (pipelines, trench drains, ditches, unlined ponds, septic tanks, NPDES outfalls, retention areas, etc.).

B. The Respondent shall conduct a program to characterize the soil and rock units above the water table in the vicinity of the contaminant release (s). Such characterization shall include

but not be limited to, the following information:

1. Surface soil distribution;

2. Soil profile, including USCS classification of soils;

3. Soil stratigraphy;

4. Hydraulic conductivity;

5. Porosity;

6. Soil properties necessary to evaluate contaminant fate and transport;

7. Particle size and distribution;

8. Depth of water table;

9. Moisture content;

10. Effect of stratification on unsaturated flow;

11. Storage capacity; and

12. Vertical flow rate.

C. The Respondent shall initially conduct a program to characterize the surface water bodies on the facility. If that investigation indicates off-site migration of hazardous constituents, off-site investigation will be warranted. Such characterization shall include, but not be limited to, the following activities and information:

1. Description of the temporal and permanent surface-water bodies including:

a) For lakes and ponds: location, approximate elevation, surface area, and volume;

b) For impoundments: location, approximate elevation, surface area, depth, volume, freeboard, and purpose of the impoundment;

c) For streams, ditches, drains, swamps and channels: location, approximate elevation, estimated flow, and flooding tendencies (i.e., 100 year event) if appropriate; and

d) Drainage patterns.

2. Description of the chemistry of the natural surface water and sediments potentially affected by hazardous

constituents migration from the facility. Chemicals of interest will include facility-specific constituents and general water quality parameters.

3. Description of sediment characteristics including:

a) Deposition area; and

b) Physical and chemical parameters.

D. The Respondent shall provide summary information characterizing the climate in the vicinity of the facility. Such information shall include, but not be limited to:

1. A description of the following parameters:

a) Annual and monthly rainfall averages;

b) Monthly temperature averages and extremes;

c) Wind speed and direction;

d) Atmospheric pressure;

e) Evaporation data; and

f) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence.

2. A description of topographic and manmade features which affect air flow and emission patterns, including:

a) Ridges, or hills;

b) Valleys;

c) Surface water bodies (i.e. rivers, lakes, bays, etc.);

d) Wind breaks and forests, and

e) Buildings.

Source Characterization:

1. The Respondent shall collect analytical data as appropriate to supplement existing data to characterize the wastes and the areas where wastes have been placed, collected or removed including: type; approximate quantity; physical form; disposition; and facility characteristics affecting release (e. g., facility security, engineered barriers, etc.) This shall include identification of the following specific characteristics

at each source area:

A. Source Area Characteristics:

1. Location of source area;

2. Type of unit/disposal source area;

3. Design features;

4. Operating practices (past and present);

5. Period of operation;

6. Age of source area;

7. General physical conditions; and

8. Method used to close source area.

B. Waste Characteristics:

1. Type of waste placed in the area;

a) Hazardous waste classification (e.g. ignitable, corrosive, etc);

b) Approximate quantity; and

c) Chemical composition, as known.

2. Physical and chemical characteristics to the extent reasonably available to Respondent;

a) Physical form (solid, liquid, gas);

b) Physical description (e.g. powder, oily sludge, etc); and

c) General chemical class (e.g., acid, base, solvent, etc.);

3. General migration and dispersal characteristics of the waste.

Contamination Characterization:

1. The Respondent shall collect analytical data on ground water, soils, surface water, and sediment contamination in the vicinity of the facility as defined in the RFI Workplan and the subsequent revisions thereto. If the investigation so indicates, Respondent shall collect analytical data on air and subsurface gas contamination. This data shall be sufficient to define the

extent, origin, direction, and rate of movement of contamination. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling and the identity of the individuals performing the sampling and analysis. The Respondent shall address the following types of contamination at the facility:

A. The Respondent shall conduct a Ground Water Investigation to characterize the nature and extent of groundwater contamination at the facility. This investigation at a minimum will provide the following information:

1. A description of the horizontal and vertical extent of any immiscible or dissolved contamination originating from the facility;

2. The horizontal and vertical direction of contamination movement;

3. The velocity of contaminant movement;

4. The horizontal and vertical concentration profiles of facility specific constituents in the groundwater;

5. An evaluation of factors influencing the movement of contaminated groundwater; and

6. An extrapolation of future contaminant movement.

B. The Respondent shall conduct an investigation to characterize the contamination of soil and rock units above the water table in the vicinity of the contaminant release. The investigation shall provide the following information:

1. A description of the horizontal and vertical extent of contamination;

2. A description of contaminant and soil chemical properties within the contaminant source area and groundwater. This shall include relevant factors that might affect contaminant migration and transformation.

3. Specific contaminant concentrations; and

4. An extrapolation of future contaminant movement.

C. The Respondent shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from contaminant releases originating at the facility. The investigation shall initially be conducted on surface water bodies on the facility property, until such time that the investigation indicates that contamination may have

migrated off-site. The investigation shall include but not be limited to, the following information:

1. A description of the horizontal and vertical extent of any immiscible or dissolved contaminants originating from the facility, and the extent of contamination in underlying sediments;

2. The horizontal and vertical direction of contaminant movement;

3. An evaluation of the physical, biological and chemical factors influencing contaminant movement;

4. An extrapolation of future contaminant movement; and

5. A description of the chemistry of the contaminated surface waters and sediments including relevant factors that might affect contaminant migration and transformation.

Potential Receptors:

1. The Respondent shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples and the collection of data on observable effects in ecosystems will not be obtained unless determined by EPA based on the results of the RFI field investigation. The following characteristics shall be identified:

A. Local uses and possible future uses of ground water in the vicinity of the facility as defined in the RFI Workplan and subsequent revisions thereto:

1. Type of use (e.g., drinking water source, municipal or residential, agricultural, and industrial); and

2. Location of ground water users including wells and discharge areas.

B. Local uses and possible future uses of surface waters draining the facility in areas that could potentially be impacted by releases from the facility:

1. Domestic and municipal (e.g., potable and lawn/gardening watering);

2. Recreational (e.g., swimming, fishing);

3. Agricultural;

4. Industrial; and

5. Environmental (e.g., fish and wildlife propagation).

C. Human use of or access to the facility and immediately adjacent lands, including but not limited to:

1. Recreation;

2. Hunting;

3. Residential;

4. Commercial;

5. Zoning; and

6. Relationship between population locations and prevailing wind direction.

D. A description of the biota likely present in surface water bodies on, adjacent to, or affected by the facility based on available public records unless otherwise warranted.

E. A description of the ecology overlying and immediately adjacent to the facility based on available public records unless otherwise warranted.

F. A demographic profile of the people who use or have access to the facility and immediately adjacent land based on available public records unless otherwise warranted.

G. A description of any endangered or threatened species at or near the facility based on available public records unless otherwise warranted.

**TASK V:** Investigation Analysis

The Respondent shall prepare analyses and summaries of facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e. g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support the Corrective Measures.

Data Analysis

1. The Respondent shall analyze facility investigation data outlined in Task IV including data obtained from previous investigations and prepare a report on the type and extent

of contamination at the facility including sources and migration pathways. The Report shall describe the extent of contamination (qualitative/quantitative) in relation to background levels.

Protection Standards:

1. Ground water Protection Standards

For regulated units, Respondent shall provide information to support the Agency's selection/development of ground water protection standards for hazardous constituents found at the facility during the RFI.

A. The ground water protection standards shall consist of:

i) For any constituents listed in Table 1 of 40 CFR § 264.94, the respective value given in that table (MCL) if the background level of the constituent is below that given in the table; or

ii) The background level of that constituent in the ground water; or

iii) A U.S. EPA approved alternate concentration limit (ACL).

B. Information to support the Agency's subsequent selection of ACL's shall be developed by Respondent in accordance with U.S. EPA guidance. For any proposed ACL's Respondent shall include a justification based upon the criteria set forth in 40 CFR § 264.94(b).

C. Within sixty (60) days of receipt of any proposed ACL's the U.S. EPA shall notify Respondent in writing of approval, disapproval or modifications. U.S. EPA shall specify in writing the reasons for disapproval or modification.

D. Within forty (45) days of receipt of U.S. EPA's notification or disapproval of any proposed ACL Respondent shall amend and submit revisions to the U.S. EPA.

2. Other Relevant Protection Standards

Respondent shall identify all relevant protection standards for the protection of human health and the environment. These standards may include established regulatory limits as well as levels established through the performance of a human health risk assessment.

**TASK VI:** Laboratory and Bench Scale Studies

If deemed necessary by Respondent or EPA and from the Pre-Investigation Evaluation of Corrective Measures Technologies and the subsequent facility investigation, the Respondent shall

conduct laboratory and/or bench scale studies to determine the applicability of a corrective measure technology or technologies to facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contacts, and past experience to determine the testing requirements.

If laboratory and bench scale studies are warranted, the Respondent shall develop a testing plan identifying the type(s) and goal(s) of the studies, the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Respondent shall prepare a report providing a summary of the testing program and its results, both positive and negative. The report will be submitted in accordance with the schedule contained in the approved testing plan.

**TASK VII:** Reports

Preliminary and Workplan:

1. The Respondent shall submit to the EPA the Task I report (CCR) and the Task II report (Pre-investigation Evaluation Report) within 60 and 90 days of the effective date of this Consent Order, respectively. The Task III report (RFI Workplan) shall be submitted within the later of 45 days of receipt of EPA comments on the Task I Report or 150 days ofthe efective date of this Consent Order whichever is later.

Progress:

1. The Respondent shall at a minimum provide EPA with signed, bi-monthly, progress reports containing:

A. A description of the work completed during the reporting period and an estimate of percentage of the project completed;

B. Summaries of all material findings made during the reporting period;

C. Summary of all activities conducted and contacts made with government officials and interest groups during the reporting period.

D. Summaries of all material problems or potential problems encountered during the reporting period;

E. Changes in key project personnel during the reporting period;

F. The projected work for the next reporting period;

G. Copies of daily reports and inspection reports generated during the reporting period;

H. To the extent known, notification specifying the dates in the next reporting period in which any sampling event will occur either on or off site of the facility; and

I. To the extent known, notification specifying the dates in the next reporting period in which any well drilling, borings, or installation of equipment or sampling will occur on or off site of the facility.

Draft and Final:

1. The Respondent shall prepare a RCRA Facility Investigation Report to present Tasks IV - V. The RCRA Facility Investigation Report shall be developed in draft form for EPA review. The RCRA Facility Investigation Report shall be developed in final format in accordance with Section VII of this Consent Order.

2. Three (3) copies of all reports including the Task I report, Task II report, Task III Workplan, Task IV report, and both the Draft and Final RCRA Facility Investigation Reports (Task IV - V) and the Task VI Workplan and report shall be provided by the Respondent to EPA.

Schedule for Report Submittal:

The Respondent shall develop and submit the following reports and workplans in accordance with the schedule below:

| Facility Submittal | Due Date |
|---|---|
| Description of Current Conditions (Task I) Report | 60 calendar days from the effective date of this Order. |
| Pre-Investigation Evaluation of Corrective Measures Technologies (Task II) | 90 calendar days from the effective date of this Order. |
| Draft RFI Workplan (Task III) | Within the later 45 days from receipt of EPA comments on the Current Conditions Report or 150 days of the effective date of this Order. |
| Revised RFI Workplan | 45 calendar days from |

| | |
|---|---|
| (Task III) | receipt of EPA comments on the Draft RFI Workplan |
| Draft RFI Report (Tasks IV and V) | In accordance with the RFI Workplan Schedule |
| Revised RFI Report (Tasks IV, and V) | 45 calendar days from receipt of EPA comments on the Draft RFI Report |
| Draft Bench Scale Study Workplan, if appropriate | In accordance with the schedule set forth in the EPA approved RFI Workplan |
| Revised Bench Scale Study Workplan, if appropriate | 45 calendar days from receipt of EPA comments on the Draft Bench Scale Study Workplan |
| Draft Bench Scale Study Report, if appropriate | In accordance with the schedule set forth in the EPA approved Bench Scale Study Workplan |
| Revised Bench Scale Study Report, if appropriate | 45 calendar days from receipt of EPA comments on the Draft Bench Scale Study Report |
| Progress Reports on Tasks I through VI | Bi-Monthly within 15 days following the end of the reporting period. |

ATTACHMENT III

Scope of Work for a Corrective Measures Study

The purpose of the Corrective Measure Study (CMS) is to develop and evaluate the corrective action alternative or alternatives and to recommend the corrective measure or measures to be taken at Respondent's facility. The Respondent will furnish the personnel, materials, and services necessary to prepare the corrective measure study, except as otherwise specified.

**SCOPE** - The Corrective Measure Study consists of four tasks:

Task VIII: Identification and Development of the Corrective Measure Alternative or Alternatives;

Task IX: Evaluation of the Corrective Measure Alternative or Alternatives;

Task X: Justification and Recommendation of the Corrective Measure or Measures; and

Task XI: Reports.

**TASK VIII:** CMS Task 1 - Identification and Development of the Corrective Measure Alternative or Alternatives

Based on the results of the RCRA Facility Investigation and consideration of the identified Pre-Investigation Evaluation of Corrective Measure Technologies (Task II), the Respondent shall identify, screen and develop the alternative or alternatives for removal, containment, treatment and/or other remediation of the contamination resulting from the release of hazardous wastes and/or constituents ("Contaminants") at the facility based on the objectives established for the corrective action.

Description of Current Condition:

1. The Respondent shall submit an update to the information describing the current conditions at the facility and the known nature and extent of contamination as documented by the RCRA Facility Investigation Report. The Respondent shall provide an update to information presented in Task I of the RFI to the EPA regarding previous response activities and any interim measures which have been or are being implemented at the facility. The Respondent shall also make a facility specific statement of the purpose for the response, based on the results of the RCRA

Facility Investigation. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

Establishment of Corrective Action Objectives:

1. The Respondent, in conjunction with the EPA, shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RCRA Facility Investigation, EPA Guidance, and the requirements of any applicable Federal statutes. At a minimum, all corrective actions concerning ground water releases from regulated units must be consistent with those required under 40 CFR § 264.100.

Screening of Corrective Measure Technologies:

1. The Respondent shall review the results of the RCRA Facility Investigation and reassess the technologies specified in the Task II report as approved by EPA and identify additional technologies, if any, which are applicable at the facility. The Respondent shall screen the preliminary corrective measures technologies identified in Task II of the RCRA Facility Investigation and any supplemental technologies to eliminate those that may prove unfeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objectives within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site specific conditions. The screening step may also eliminate technologies based on inherent technology limitations. Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

A. Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration.

B. Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration.

C. During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point

where they can be implemented in the field without extensive technology transfer or development.

Identification of the Corrective Measure Alternative or Alternatives:

1. The Respondent shall develop the corrective measure alternative or alternatives based on the corrective action objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task II of the RCRA Facility Investigation and as supplemented following the preparation of the RFI Report. The Respondent shall rely on generally accepted engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternative or alternatives. The alternative or alternatives developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task II, as supplemented in the development of the alternative or alternatives.

**TASK IX:** Evaluation of the Corrective Measure Alternative or Alternatives

The Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VIII and evaluate each corrective measure alternative and it's components. The evaluation shall be based on technical, environmental, human health and institutional concerns and cost-effectiveness. The Respondent shall also develop cost estimates for each corrective measure.

Technical/Environmental/Human Health/Institutional/ Cost-Effectiveness

1. The Respondent shall provide a description of each corrective measure alternative which includes, but is not limited to, preliminary process flow sheets, preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Respondent shall evaluate each alternative in the following areas:

a. The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

2. The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:

a. Effectiveness shall be evaluated in terms of ability to

perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

b. Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

3. The Respondent shall provide information on the reliability of each corrective measure including its operation and maintenance requirements and its demonstrated reliability:

a. Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and

b. Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

4. The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:

a. Constructability is determined by the conditions both internal and external to the facility conditions and include such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. congested urban area). The Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special

permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

b. Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

5. The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those workers exposed during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

a. The Respondent shall perform a qualitative Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, a qualitative evaluation of: the short and long term beneficial and adverse effects on environmentally sensitive areas as identified in the approved RFI report; and an analysis of measures to mitigate adverse effects.

b. The Respondent shall assess each alternative in terms of the extent of which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants identified on site, potential exposure routes, and potentially affected populations as identified in the approved RFI report. Each alternative will be evaluated in terms of the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be evaluated by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA and current health and environmental risk information.

c. The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

d. Respondents shall assess the cost-effectiveness of each alternative. The assessment shall consider the protectiveness with regard to human health and the environment and cost of each alternative as compared to other alternatives.

Cost Estimate:

1. The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

A. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

1. Direct capital costs include:

a) Construction costs: costs of materials, labor, and equipment required to install the corrective measure.

b) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the corrective action; these materials remain until the corrective action is complete.

c) Land and site-development costs: Expenses associated with the purchase of land and development of existing property; and

d) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.

2. Indirect capital costs include:

a) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;

b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;

c) Startup and shakedown costs: Costs incurred during corrective measure startup; and

d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

B. Operation and Maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Respondent shall consider the following operation and maintenance cost components:

1. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed

for post-construction operations;

2. Maintenance materials and labor costs; Costs for labor, parts and other resources required for routine maintenance of facilities and equipment;

3. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water, sewer service, and fuel;

4. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;

5. Disposal and treatment costs: Costs of transporting, treating and disposing of waste materials such as treatment plan residues, generated during operations;

6. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;

7. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

8. Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and

9. Other costs: Items that do not fit any of the above categories.

**TASK X:** Justification and Recommendation of the Corrective Measure or Measures

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, environmental, institutional, and cost-effective criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The EPA will select the corrective measure alternative or alternatives to be implemented based on the results of Tasks IX and X. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

Technical:

A. Performance - corrective measure or measures which are

most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference.

B. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be given preference;

C. Implementability - corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and

D. Safety - corrective measures or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

Human Health:

1. The corrective measure or measures must comply with existing EPA criteria, standards, or guidelines for the protection of human health. Respondents may also propose alternate standards based on recent technical developments affecting such standards, risk assessment evaluations, and/or other human health and environmental studies available at the time of the decision. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

Environmental:

1. The corrective measure or measures posing the least adverse impact (or greatest improvement) on the environment over the shortest period of time will be preferred.

Institutional:

The corrective measure or measures most compatible with the existing institutional framework will be preferred.

Cost-Effectiveness:

Direct and indirect capital costs and operations and maintenance costs incurred over the life of the project will be considered.

**TASK XI:** Reports

The Respondent shall prepare a Corrective Measures Study Report presenting the results of Tasks IX and X and recommending

a corrective measure alternative. Three (3) copies of the Workplan and Report shall be provided by the Respondent.

Progress:

1. The Respondent shall, at a minimum, provide EPA with signed, bi-monthly, progress reports containing:

A. A description of the work completed during the reporting period and an estimate of the percentage of the Corrective Measures Study project completed;

B. Summaries of all material findings made during the reporting period;

C. Summaries of all activities conducted and contacts made with government officials and interest groups during the reporting period;

D. Summaries of all material problems or potential problems encountered during the reporting period;

E. Changes key in project personnel during the reporting period;

F. The projected work for the next reporting period;

G. Copies of daily reports and inspection reports generated during the reporting period;

H. To the extent known, notification specifying the dates in the next reporting period in which any sampling event will occur either on or off site of the facility;

I. To the extent known, notification specifying the date in the next reporting period in which any well drilling, borings, or installation of equipment or sampling will occur on or off site of the facility.

Draft Report:

1. The Draft Corrective Measure Study report shall, at a minimum, include:

A. A description of the facility:

1. Site topographic map and preliminary layouts.

B. A summary of the corrective measure or measures;

1. Description of the corrective measure or measures and rationale for selection;

2. Performance expectations;

3. Preliminary design criteria and rationale;

4. General operation and maintenance requirements; and

5. Long term monitoring requirements.

C. A summary of the RCRA Facility Investigation and impact on the selected corrective measure or measures:

1. Field studies (ground water, surface water, soil, air);

D. Design and implementation considerations to include but not be limited to:

1. Special technical problems;

2. Additional engineering data required;

3. Permits and regulatory requirements;

4. Access, easements, right-of-way;

5. Health and safety requirements; and

6. Community relations activities.

E. Cost estimates and schedules:

1. Capital cost estimate;

2. Operation and maintenance cost estimate; and

3. Preliminary project schedule (design, construction, operation)

Final Report:

1. The Respondent shall finalize the Corrective Measures Study Report in accordance with Section VII of this Consent Order.

2. Three (3) copies of all reports, including the Draft Corrective Measures Study Report and Final Corrective Measures Study Report, shall be provided by the Respondent to EPA.

Schedule for Report Submittal:

The Respondent shall develop and submit the following reports in accordance with the schedule below:

| Facility Submittal | Due Date |
|---|---|

| | |
|---|---|
| Draft Corrective Measures Study Workplan (Task VIII) | 45 days after receipt of EPA approval of the final RFI Report |
| Revised Corrective Measures Study Workplan (Task VIII) | 45 days after receipt of EPA comments on Draft CMS Workplan |
| Draft Corrective Measures Study Report (Tasks IX, and X) | In accordance with the CMS Workplan schedule |
| Revised Corrective Measures Study Report (Tasks IX, and X) | 45 days after receipt of EPA comments on the Draft Corrective Measures Study Report |
| Progress Reports on Tasks VIII, IX, and X | Bi-Monthly |